



Our Reference: AMI-158-B

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Karl Van Blankenburg & Edward J. Belfour  
Serial Number: 09/923,694  
Filing Date: August 7, 2001  
Examiner/Art Group Unit: Phan, Hau Van/3618  
Title: GOALIE SKATE PROTECTIVE SHELL  
WITH REMOVABLE BLADE

DECLARATION UNDER 37 C.F.R. §1.132

Commissioner for Patents  
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Alexandria, VA 22313-1450

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Sir:

I, Karl Van Blankenburg, hereby declare that:

1. I have 22 years experience in the design, development and use of molds for molding plastic parts and have been employed by the American Team, a plastic molding company specializing in manufacturing plastic molded parts for 28 years.
2. I have reviewed U.S. Patent No. 6,109,622 to Reynolds and U.S. Patent No. 6,412,934 to Graf.
3. In my experience in molding plastic parts, specifically including insert molding metal inserts in a plastic part, Graf teaches and can only be made by an insert molding process wherein the metal blade is fixed in a mold cavity prior to closure of the mold cavity and the injection of plastic therein. The plastic flows around the undercut notches at the fore and aft ends of the blade of Graf as well as around the smaller notches on opposite sides of a central tab and through an aperture formed in the tab. The only purpose for the notches in the ends of the blade, the tab, and the aperture in the tab is to secure the blade in the integral shell/holder of Graf.

4. Specifically, the drawings of Graf clearly show that Graf can only be made by an insert molded process as the shape of the blade prohibits mounting of a separate blade in an open groove in the integral shell/holder after the shell/holder has been formed. This is due to the inward extending fore and aft ends of the blade adjacent to the notches and the centrally located tab which forms a dove-tail connection with the holder. The blade cannot be separate from the shell/holder and mounted in this shell/holder after the shell/holder has been molded as one end and the central tab cannot be mounted in any preformed mating recess in the holder.

5. Reynolds discloses a conventional blade holder for an ice skate in which tabs on the blade fit into enlargements in an open-ended groove formed in the holder. Laterally extending apertures in the holder receive fasteners which extend through apertures in the blade tabs for releasably securing the blade in the holder.

6. In my experience in the field of plastic molding, the blade holder of Reynolds requires only a straightforward, simple molding process to form the holder, the lateral bores and the open-ended groove. This is due to the relatively flat upper portions of the holder which subsequently engage the bottom of a skate boot. The holder of Reynolds lacks any undercuts in the upper end which would complicate the mold design.

7. My goalie skate protective shell with removeable blade needs a complex molding design which requires unique tooling to form the toe and heel portion integrally with respect to the blade holder.

8. The toe and heel portions of my invention are formed in the mold with moveable inserts. These inserts move away from one another along the longitudinal axis of the sole of the shell when the skate is formed to define the inner surface of the cowling. The moveable inserts move toward one another along the longitudinal axis of the sole after the shell has been formed to separate from the formed cowling. The blade holder is disposed beneath the sole and includes an open ended groove. The open ended groove is also formed by a moveable insert in the mold. The groove-forming insert moves generally perpendicular to the sole of the protective shell after the open ended groove has been formed. Therefore, the movements of the inserts that form the toe and heel portions and the movements of

the groove-forming insert are not parallel or perpendicular to one another. This fact necessitated extensive development of the mold for forming the skate which took approximately six years and cost approximately \$250,000.00. All of the prior art patents teach forming a replaceable blade holder as a separate component from the toe and heel portion of the skate cowl or shell.

10. I reviewed the Examiner's stated motivation to combine the Graf and Reynolds patents in which the Examiner states that it would have been obvious to combine the references in order to increase the force opposing deformation of the blade given by the transverse force. Based on my experience in forming hockey skates and with plastic molded parts in general, The Examiner's stated motivation to combine the fasteners of Reynolds in place of the insert molded blade of Graf is mere speculation as the fasteners in Reynolds are not intended to increase a force opposing deformation of the blade; but merely provide for releasable attachment of the blade to the holder.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

By: Karl Van Bladel

Date: Sept. 12, 2003